

Applicant: PFEIFER *et al.*  
Serial No.: 09/985954  
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LISTING OF CLAIMS

1. (Previously presented) An exhaust gas treatment unit for the selective catalytic reduction of nitrogen oxides under lean exhaust gas conditions comprising an oxidation catalyst for oxidizing nitrogen monoxide contained in the exhaust gas to nitrogen dioxide and downstream thereof one catalyst in the form of a honeycomb structure with a catalytically active component for selective catalytic reduction of nitrogen oxide and at least one storage component for nitrogen oxides, said storage component comprising at least one compound of an element selected from the group consisting of an alkali metal, an alkaline earth metal, and cerium which are able to store nitrogen dioxide by forming nitrates, and wherein said storage component for nitrogen oxides comprises no catalytically active platinum group metals.
2. (Previously presented) The exhaust gas treatment unit according to claim 1, wherein said catalytically active component for selective catalytic reduction of nitrogen oxides is a solid acid system of titanium dioxide and vanadia.
3. (Previously presented) The exhaust gas treatment unit according to claim 2, wherein the solid acid system also contains at least one component selected from the group consisting of tungsten oxide, molybdenum oxide, silicon dioxide, sulfate and zeolites, wherein the zeolites can be present in the acid H form or can be exchanged with metal ions.
4. (Previously presented) The exhaust gas treatment unit according to claim 1, wherein said catalytically active component for selective catalytic reduction of nitrogen oxides contains at least one zeolite, wherein the zeolite can be present in the acid H form or can be exchanged with metal ions.
- 5.- 10. (Cancelled)

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11. (Previously presented) The exhaust gas treatment unit according to claim 1, wherein the honeycomb structure of the catalyst is obtained by preparing an extrudable composition comprising the catalytically active component for selective catalytic reduction of nitrogen oxides and the at least one storage component for nitrogen oxides and extruding the extrudable composition to produce the honeycomb structure.

12. (Previously presented) The exhaust gas treatment unit according to claim 1, wherein the honeycomb structure of the catalyst is a full extrudate from said catalytically active component for selective catalytic reduction of nitrogen oxides onto which are applied the nitrogen oxide storage components in the form of a coating.

13. (Previously presented) The exhaust gas treatment unit according to claim 1, wherein the honeycomb structure of the catalyst is obtained by applying said catalytically active component for selective catalytic reduction of nitrogen oxides and the nitrogen oxide storage component in the form of a coating onto an inert carrier structure in the form of a honeycomb monolith.

14. (Previously presented) The exhaust gas treatment unit according to claim 13, wherein said catalytically active component for selective catalytic reduction of nitrogen oxides and the nitrogen oxide storage component are present in two separate layers on the inert carrier structure.

15. (Previously presented) The exhaust gas treatment unit according to claim 14, the layer with the nitrogen oxide storage component is applied directly to the support structure and the layer with the catalytically active component for selective catalytic reduction of nitrogen oxides is on top of the layer with the nitrogen oxide storage component and is in direct contact with the exhaust gas.

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17. (Previously presented) The exhaust gas treatment unit according to claim 1, further comprising a hydrolysis catalyst located in the exhaust gas treatment unit, between the oxidation catalyst and the catalyst for selective catalytic reduction.

16. (Cancelled)

18. (Previously presented) The exhaust gas treatment unit according to claim 1, further comprising an ammonia barrier catalyst is located in the exhaust gas treatment unit, downstream of the catalyst for selective catalytic reduction.

19.-28. (Cancelled)

29. (Previously presented) An exhaust gas treatment unit for the selective catalytic reduction of nitrogen oxides under lean exhaust gas conditions, comprising:

(a) an oxidation catalyst for oxidizing nitrogen monoxide in exhaust gas to nitrogen dioxide; and,

(b) downstream of the oxidation catalyst a single catalyst member comprising a honeycomb support and a first layer and a second layer, wherein

(i) the first layer contacts the honeycomb support and comprises one or more storage components for storing nitrogen oxides as nitrates, wherein the one or more storage components consist essentially of one or more compounds of an element selected from the group consisting of an alkali metal, an alkaline earth metal, and cerium; and

(ii) wherein the second layer is in contact with exhaust gas and comprises a catalytically active component for selective catalytic reduction of nitrogen oxide.